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ABSTRACT

Businesses in South Dakota were surveyed to gauge employers' perceptions of vocational education, to determine the extent of private sector interaction with vocational education, and to document employers' experiences with vocationally trained and nonvocationally trained employees. The statistically valid random sample consisted of 347 small businesses, 319 large businesses, and 54 public sector employers. The major finding was that vocational education programs and graduates have solid employer support in South Dakota. A large share of employers had interacted with the vocational education system in some manner, for example, cooperative work experience programs, input in curricular decisions, or donations of equipment. Small businesses tended to be more positive toward vocational education than large businesses. A second major finding was the systematic differences between vocationally and nonvocationally trained workers. The employers praised cooperative work experience programs highly, showed strong support of the basic skill attainment of vocational education students, paid vocationally trained workers higher wages, and promoted them more quickly. Respondents made favorable remarks about certain programs but were critical of others. Several felt that courses should be developed and offered in specialized program areas. (YLB)

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EMPLOYER PERCEPTIONS OF VOCATIONAL EDUCATION IN SOUTH DAKOTA

VOLUME I: FINDINGS AND RECOMMENDATIONS

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FOREWORD

Under section 112 of the Carl Perkins Vocational Education Act, the South Dakota Council on Vocational Education (COVE) is required to "advise the State Board of Vocational Education and report to the Governor, the business community, and general public of the state concerning policies the State should pursue to strengthen vocational education and initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs." It shall, furthermore, "submit recommendations to the State board on the conduct of vocational education programs conducted in the State which emphasize the use of business concerns" and "recommend procedures to the State board to ensure and enhance the participation of the public in the provision of vocational education at the local level within the State, particularly the participation of local employers and local labor organizations." To address these issues and to gauge employer perceptions of vocational education, the South Dakota COVE commissioned a survey of employers in the State. This report and its companion volume document the findings from the survey and recommendations emanating from those findings.

This study would not have been possible without the cooperation and assistance of the 750 employers who so graciously responded to our telephone interview. We greatly appreciate the time and the insights that these busy men and women contributed to the study.

We also thank the South Dakota Council for support of the project and Lloyd Schipper, who served as project officer, for his guidance and support. Don Kattke and Gordon Larson of the Unemployment Insurance Office of the State were very helpful. The development of the questionnaire benefitted from the review and comments of a panel of employers in the state--Steve Harding, Eldon Lindquist, Bob Reiman, Dave Bonde, and Bob Wagner. We thank them for their time and comments.

The telephone surveys were competently conducted by Betty Abbitt, Joyce Coriell, Carolyn Davis, Avanell Frisbey, Joan Gibson, Martha Hughes, Elizabeth Martinez, Dennis Sandage, and Ann Tarpy under the guidance of the Project Director, Dr. Kevin Hollenbeck. Dr. Hollenbeck designed the survey and wrote the final report. Helpful procedural comments were received from Michael Card and Dr. N. L. McCaslin of the National Center. The computer programming and analyses were performed by Frank Bennici.

Dr. Robert Bhaerman of the National Center, and Mr. Oscar Lowery, Chair of the Indiana Council on Vocational Education, reviewed the final report and made many useful suggestions. The report was edited by Judy Balogh and typed by Debbie Fladen. We thank them all for their time and effort.

Ray D. Ryan
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

A statistically valid random sample of small and large businesses in the state of South Dakota were surveyed in order to gauge employers' perceptions of vocational education, to determine the extent of private sector interaction with vocational education, and to document employers' experiences with vocationally trained and nonvocationally trained employees. This document summarizes the findings and recommendations from that survey. A companion report, "Employer Perceptions of Vocational Education in South Dakota Volume II: Technical Report," documents the procedures followed and analyses undertaken in the study.

The major finding established by this project was that vocational education programs and graduates have solid employer support in South Dakota. When they hire high school graduates for entry-level positions, most employers reported that they would prefer individuals who have completed a vocational education program. They disagreed with the statement that if everything else was the same about a job candidate that they would hire someone with a 4-year college degree rather than someone from a vocational-technical school. They encourage employees who want more schooling to attend vocational-technical schools or colleges. A large share of employers have participated in cooperative work experience programs, have been contacted by high school or postsecondary representatives to prvide input into curricular decisions, have donated equipment, or have interacted with the vocational education system in some other manner.

Individual respondents reported that they had had good experiences with a number of specific programs and that vocational education graduates that are hired--

-- are more enthusiastic.
-- require less training.
-- are preferred over college or military trained persons.
-- are preferred over individuals with several years work experience.

To be sure, the employer support was not unanimous. A significant number of employers were critical of the system or its graduates. Across the sample of employers, small business respondents tended to be more positive toward vocational education than large businesses, and correspondingly, owners of businesses were more favorable than corporate officers. Across the sample, employers were more familiar with and more favorable toward postsecondary vocational education than high school programs.

A second major finding from the study was the systematic differences found between vocationally trained and non-vocationally trained workers. Data supplied about specific workers hired recently indicated that vocationally trained workers tended to--

-- be younger at age of hire.
-- have greater educational attainment.
-- have less prior relevant work experience.
-- be more likely to be promoted.
-- receive more training on the job.
-- experience greater wage growth during the early part of the employment relationship.

These conclusions were buttressed by individual comments that indicated that vocationally trained workers--

-- had better work attitudes.
-- exhibited more common sense.
-- were more enthusiastic.

The employers, in general, were very earnest in their responses and provided a number of suggestions for vocational education policymakers in the state to consider. First of all, cooperative work experience programs were highly praised. Most employers agreed with the proposition that they would prefer to hire an individual who had successfully completed a cooperative work experience program over an otherwise identical individual without cooperative work experience but with higher grades. Furthermore, well over half of the employers indicated that they had participated in a cooperative work experience or internship program. Co-op programs also are a means of "teaching" work maturity skills, which was a concern of some of the employers critical of vocational education.

A second item of policy relevance was the strong support of basic skill attainment of vocational education students. Most employers felt that the graduates of vocational education programs had adequate basic skills to perform entry-level jobs in their firms. The employers did feel that basic skills should be emphasized in secondary programs, whereas technical skills should be emphasized in postsecondary programs, however.

A third finding with policy relevance was the wage and promotion benefit of vocational training to workers. The state and individual municipalities should be aware that to the extent that vocationally trained individuals receive higher wages, the public is receiving a return on their investment in the vocational education. Individuals with higher wages and incomes pay more taxes and receive fewer public services.

In general comments, the respondents made a number of interesting remarks with policy relevance. For example, comments were made about specific programs currently being offered. Favorable remarks were received about the following programs:

- Licensed practical nursing
- Electronics
- Distributive education programs in high schools

Employers were critical of aspects of the following programs:

- o Auto mechanics
- o Construction trades
- o Machine trades
- o Food preparation

Several employers felt that consideration should be given to developing and offering courses in a number of program areas where no program currently existed. The employers were sensitive to the fact that some of their suggested programs were highly specialized and would have limited student interest. However, some of these suggested programs would likely engender sufficient student demand.

Comments were also received concerning curricular and instructional issues. For instance, a number of employers felt that vocational instructors needed to communicate more with employers. They need to teach or flexibility according to other employers. Students need to learn that they will be facing changing technology as well as using different equipment and they will need to be flexible enough to adapt to the company's way of getting the job done. Better communication skills seemed to be a particular area that employers felt warranted emphasis in vocational education. Some employers felt that the state needed to be concerned about the impact of increased requirements and standards at the high school level on secondary vocational education programs.

Finally, some general comments made by employers suggested the following:

- o Vocational education is a good motivator for a certain share of students.
- o More emphasis needs to be put on the <u>majority</u> of students who are not college bound.
- o Vocational-technical school programs are well-suited to Indian students and vocational education may be part of the solution to tribes' economic and social problems.
- o More and better publicity needs to be put forth concerning vocational education.

In summary, the vocational education enterprise in South Dakota enjoys a strong base of employer support. Small businesses, in particular, are advocates of occupational training. Employers seem to be most familiar with and most favorable toward vocational-technical schools. On the average, employers professed a preference toward hiring vocational graduates, and on the average, vocational graduates experience higher wage growth.

I. PURPOSE OF STUDY AND OVERVIEW OF PROCEDURES

Purpose

Certain features of the South Dakota economy suggest that vocational education should be an important component of the education and training system in the state. First, the technological advances of the agricultural sector need to be supported and maintained by technicians. Second, the nonagricultural portions of the economy are heavily skewed toward the trade, service, and government sectors. These three sectors accounted for about three-quarters of employees on nonagricultural payrolls in March 1986. Many of the occupations in these industries are skilled--for example, clerical workers, medical technicians, information processing specialists, and food service managers. Furthermore, most establishments in these industries are small, and school-based training should be attractive from an affordability perspective. Finally, the natural dynamics of economic development--births of new establishments, relocations, labor turnover--suggest that vocational education should be a strong actor in the training system. For these four reasons, vocational education should play a vital role in training workers in the state.

The goals of the South Dakota Council on Vocational Education (COVE) are to achieve public involvement in shaping vocational education programs and activities and to establish mechanisms that will improve vocational education policies and the policy making

process.[1] The employer community is a key constituent of the vocational education system and should be involved in shaping vocational education policies and providing information about programs and graduates. It is thus highly appropriate for the COVE to gather a comprehensive picture of employer perspectives of vocational education and to determine those aspects of programs that can be used to stimulate employer and student interest and involvement in vocational education and to augment employment of that system's graduates.

Procedures

A statistically valid random sample of employers was surveyed by telephone. Large businesses (over 50 employees) were oversampled in order to attain a valid number of such businesses in the survey. A total of 808 small businesses in the private sector, 570 large businesses, and 74 public sector employers were sampled. Responses were received from 347 small businesses, 319 large businesses, and 54 public sector employers.

Five major categories of questions comprised the questionnaire. First, general characteristics about the firm were requested. The type of information collected includes the following:

- Industry
- Number of employees
- Trends in number of employees
- Number of workers covered by collective bargaining
- Occupational structure
- Typical recruitment mechanisms

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[1]"1987 COVE" (Pierre, South Dakota: South Dakota Council on Vocational Education, 1987), p.4.

Next, attitudes toward secondary vocational education were probed. Likert-type scales were used to gather opinions concerning the following:

- o Experiences with and opinions about co-op vocational education
- o Types of skills that secondary vocational education students have (employability skills, basic skills, specific occupational skills)
- o Currency of programs
- o Adequacy of equipment
- o Instructional quality

The next section of the questionnaire addresses attitudes toward postsecondary vocational education programs. In addition to the items mentioned above pertaining to secondary vocational education, the following issues were addressed:

- o Extent to which the employer is aware of and participates in curricular decision making or needs assessment surveys
- o Attitudes toward other education and training providers such as military, 4-year institutions, and JTPA agencies
- o Attitudes toward adult versus younger vocational education participants, individuals in programs that are nontraditional for their sex, and other specific student populations

The fourth section of the questionnaire asks the respondent for information about specific individuals whom the respndent hired within the past 6 months. Data on matched pairs of workers were collected--a worker who was vocationally trained, and a worker hired about the same time in a similar job who was not vocationally trained. Numerous instances occurred, however, where the matched pair of data were not available because the requisite hires were not done. If there was a least one hire, the following data were collected about that worker:

- o Demographic characteristics (age, race, gender)
- o Educational background
- o School(s) attended
- o Amount and type of on-the-job training received
- o Supervisor reports of productivity
- o Wages
- o Length of time at the firm
- o Promotions

The final section of the questionnaire is comprised of a few questions concerning the respondent's educational background and an open-ended question that asks for any general comments about vocational education.

The National Center in conjunction with the South Dakota Department of Labor mailed a copy of the instrument to the entire sample prior to the telephone interviews along with a cover letter from Governor Mickelson. A fairly complex interviewing protocol was then followed[2] that resulted in each respondent being classified as "complete," "partially complete," "refusal," "unable to contact," "6 or more attempts," or "will mail back." An analysis was conducted comparing nonrespondents to respondents to ensure that no systematic response bias occurred. That analysis indicated that very small employers (one to five employees) and retail trade establishments tended to be underrepresented in the data. The size of the bias was judged not to be serious, however.

After the surveys were conducted, the data were coded, keyed to tape, verified, and analyzed on The Ohio State University computer system. The next chapter summarizes the statistical findings of that analysis.

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[2]The companion technical report documents this protocol in detail.

II. EMPLOYER PERCEPTIONS OF AND ATTITUDES TOWARD VOCATIONAL EDUCATION

Attitudes toward Vocational Education

Employer attitudes toward vocational education were gauged by responses to opinion scales; first about vocational education in high schools and then in postsecondary settings. In both cases, the vocational education system fared well in employer opinion. Tables 1 and 2 summarize the data.

The first statement asked respondents about whether they prefer vocational education students when they hire high school graduates. Strong preference for vocationally trained students was found. Over 60 percent of the respondents either agreed or strongly agreed with the statement. Next it was suggested that high schools steer good students away from vocational education classes. Overall, the employers disagreed, but the mean rating of 3.16 is close to 3, indicating that about as many respondents agreed as disagreed. This means that there are a fair number of employers who perceive that high schools are engaged in a deliberate sorting mechanism with vocational education students.

The purpose of the next item was to gauge employers' perceptions about the currency of high school programs. On average, employers disagreed with the statement suggesting that high school programs are not up to date, although a large number of the employers had no opinion, suggesting that they were not familiar with high school programs. The next item posed dealt with the work attitudes of vocational education students relative to other students. A large number of employers responded that they had no

TABLE 1

SECONDARY VOCATIONAL EDUCATION PERCEPTIONS

Item	Rating					Mean
	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	
When I hire a high school graduate for an entry-level job, I prefer individuals who have completed a vocational education program, other things equal.	76	261	160	59	4	2.38
High schools steer good students away from vocational education classes.	21	129	168	227	20	3.16
The occupational skills that vocational education students learn are inadequate because the programs in the high schools are not up to date.	12	100	200	237	12	3.24
Vocational education students tend to have better work attitudes than other high school graduates.	25	201	221	114	4	2.77
I've noticed that vocational education students tend to do a better job at applying for jobs than do other high school students.	21	210	219	110	4	2.76
The basic skills (speaking, writing, math) of high school vocational education graduates are inadequate to perform entry-level jobs successfully in my firm.	8	57	131	339	29	3.57
I would hire a high school graduate who had participated successfully in a cooperative work experience program rather than another high school graduate who had a higher grade point average, but no co-op experiences.	29	287	143	100	5	2.58

TABLE 2

POSTSECONDARY VOCATIONAL EDUCATION PERCEPTIONS

Item	Rating					Mean
	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	
Individuals who have attended postsecondary technical programs are overqualified for entry-level jobs in my firm/company.	18	71	63	357	53	3.63
Vocational-technical schools and other postsecondary institutions seem to provide excellent occupational training to older individuals reentering the labor force or retraining to be qualified for a new occupation.	33	325	171	29	6	2.38
High schools should emphasize basic skills and postsecondary schools should emphasize technical skill training in their vocational programs.	57	349	74	73	10	2.34
If everything else were the same about a candidate, I would hire someone with a 4-year college degree rather a degree or certificate from a 1- or 2-year program in jobs where I might consider both.	18	120	91	296	38	3.38
If everything else were the same, I would hire someone technically trained in a vocational-technical school rather than someone trained in the military.	31	208	163	143	18	2.84
Individuals trained at vocational-technical schools or colleges feel they don't need to be trained on the job because they are already skilled.	12	88	115	309	39	3.49
I encourage my employees who want or need more schooling to attend vocational-technical schols or colleges.	101	313	110	39	3	2.16

opinion (presumably because they did not hire secondary vocational education students). Of those who did respond, there was about 2-to-1 agreement that vocational education students had better work attitudes. Interestingly, opinions about the job search skills of vocational education students had the same results as the work attitude question. Again, a large share of respondents had no opinion, but of those who did have an opinion, there was about 2-to-1 agreement with the statement that vocational education students had better job search skills than other high school graduates.

The employers gave a rather resounding vote of confidence to the basic skills of high school vocational education graduates. About two-thirds of the employers either disagreed or strongly disagreed with the statement that basic skills were inadequate for entry-level jobs, about 23 percent had no opinion, and only 11 percent agreed or strongly agreed.

The final item pertaining to secondary vocational education was intended to measure opinions toward cooperative work experience. Employers were asked for agreement with the statement that they would prefer individuals with cooperative work experience to individuals without such experience even if they had higher grades. The rate of agreement to disagreement on this item was about 3-to-1.

It can be observed in table 2 that far fewer "no opinion" responses were received on the postsecondary items, indicating that employers were more familiar with postsecondary programs. For the postsecondary items, the vocational education system and its

graduates again received the general approval of employers. In response to the first statement for which employers were asked about whether postsecondary students are overqualifed, only 16 percent of the employers agreed. The vast majority of the rest of the sampled disagreed or strongly disagreed. This is reflected by the mean rating of 3.63 that indicates general disagreement with the statement; 53 respondents were in strong disagreement.

Next, the employers were queried about whether they felt vocational-technical schools were serving the needs of older workers reentering the labor force. For those that offered agreement or disagreement, the ratio of agreement to disagreement was about 10-to-1. However, 171 respondents (30 percent) indicated they had no opinion which suggests that they were not familiar with this function of postsecondary institutions. This was the highest level of "non-opinion" of any of the postsecondary items. Given the strong employer approval otherwise, this may be a fruitful area for marketing vocational education benefits.

The next item addresses a contemporary issue in vocational education circles--namely should skill training be given in high schools. Employers in this survey sided strongly with those who suggest that high schools should emphasize basic skills and postsecondary institutions should emphasize technical skills. Over 70 percent of the respondents agreed or strongly agreed with a statement suggesting that secondary schools should emphasize basic skills. A total of 57 respondents (70 percent) strongly agreed.

Another issue that is being debated in education is the value of a college degree (typically reflecting some emphasis on liberal arts) as opposed to postsecondary occupational programs of 1 or 2 years. By a 3-to-1 margin, South Dakota employers do not prefer the college educated person when hiring for jobs where either the non-college- or college-educated person could be considered. The interpretation of this finding is not necessarily that vocational-technical school students are preferred to college graduates, but rather that they are not automatically at a disadvantage when competing for the same jobs.

In comparing vocational-technical training to military training, the former was preferred. As might be expected, a fairly high level of "no opinion" was received for this item. Probably these employers were not familiar with military skill training. Apart from these responses, the support for postsecondary training was not overwhelming. The mean for this opinion indicator was 2.84, which is close to 3 and thus indicates almost as much disagreement as agreement.

A concern that was voiced in the formative stages of the project by a member of the employer panel that reviewed the draft questionnaires was that sometimes vocational-technical school students tend to feel that when they graduate, they are totally trained and don't need on-the-job training. We tested the opinions of employers across the state on this issue and found that apparently the majority of employers have not encountered this attitude. Disagreement with the statement exceeded agreement by over a 3-to-1 margin.

Finally, the following statement was posed:

I encourage my employees who want or need more schooling to attend vocational-technical schools or colleges.

This item received the highest number of "strongly agree" responses of any of the postsecondary or secondary items. Overall, the mean response was 2.16, indicating very strong agreement. Employers definitely do not want vocational education experiences to stop when individuals become employed.

Interactions with the Vocational Education System

Vocational education cannot operate effectively without interacting with the employer community. Interaction can and does take many forms. Schools may establish formal work experience-based education programs; they may survey employers in curriculum planning; or they may receive donations of equipment or time, for example. In the survey, we asked employers about the extent to which they interact with secondary or postsecondary vocational education. The resulting data are provided in table 3. The entries in the table represent the percentages of the sample that indicated that they had interacted with vocational education.

A clear pattern of greater involvement between vocational education and large businesses and the public sector employers than small businesses is exhibited. In response to the question of whether the firm had participated in a cooperative work experience program, about three-quarters of the large business respondents and half the public sector respondents answered affirmatively. About 40 percent of the small businesses

TABLE 3

EMPLOYER INTERACTION WITH VOCATIONAL EDUCATION, BY SAMPLE

Interaction	Sample			Total
	Small Business	Large Business	Public Sector	
Participated in cooperative work experience	41.5%	77.2%	51.4%	59.9%
Been contacted by a school in process of curriculum decision making	17.0	33.5	26.5	25.5
Been instructor or donated equipment	19.6	33.2	34.4	26.9
--Instructor	(.9)	(8.2)	(12.5)	(5.0)
--Donation	(10.2)	(18.1)	(21.9)	(14.6)
--Both	(8.5)	(6.9)	(0.0)	(7.2)
Other forms of interaction	20.7	41.5	39.5	32.2

indicated that they had participated in such programs. The responses to the question asking the employers to describe their work experience-based program participation were classified as follows:

- Government training program (Job Service, JTPA, and others) 17.6%
- DECA involvement 17.3
- Secondary school programs (other than DECA) 16.1
- Postsecondary programs 24.0
- Other answer 24.0
- No answer 0.9

We also asked why employers had not participated if they had given a negative response. Primarily, they responded that they did not have any appropriate positions or they had never been approached.

About one-fourth of the respondents indicated that "a representative from a high school or postsecondary school had involved them or other individuals in their firm in curricular decisions." For those that so indicated, a brief description was solicited. The "no's" were asked why not. The primary responses were as follows:

- Yes's (n = 133)
  - -- On advisory boards 15.8%
  - -- Contacted by voc-tech. 24.8
  - -- Contacted by other postsecondary . . . 9.8
  - -- Contacted by high school 8.3
  - -- Other description 5.3
  - -- No description 6.0

- No's (n = 388)
  - -- Don't know why not 16.0%
  - -- Never contacted 25.3
  - -- Other answer 8.5
  - -- No answer 50.3

As with the response to the item about being contacted for curriculum decisions, just over a quarter of the respondents answered affirmatively to the next question about donating equipment or being on instructor for a vocational school. The data in table 3 show that the largest share of these responses indictated donations or both.

The final question about interactions with vocational education was a general one that asked simply for any other type of interaction (other than cooperative work experience, involvement in curriculum decision making, or instructor/donation). About a third of the sample indicated that they had interacted with the vocational education system in some other manner. The responses to the probe of how they had interacted were classified as follows:

- On advisory boards 16.0%
- Occasional lectures or presentations 28.7
- Hiring referrals 3.9
- Other answer (e.g., training instructors) 49.7
- No answer 1.7

Profiles of Vocationally Trained and Nonvocationally Trained Workers

The third section of the questionnaire asked for data about the firm's last new employee hired prior to 1 October 1986. The employee could have been in a management or nonmanagement position. The questionnaire also asked for data about a second worker who holds the same job as the first. If the first worker had had vocational training, then the survey specified that the second worker would not be vocationally trained. If the first worker did not have formal vocational education, then the survey's format required that the second worker should have had it. Through this process, profiles of the vocationally trained and non-vocationally trained work force in the state could be constructed.

In table 4, the gender, age at the time of hire, and highest grade completed characteristics of the vocationally trained and nonvocationally trained workers are summarized. In both cases, slightly over 50 percent of the workers were males. The vocationally trained workers tended to be younger at the time of hire--35 percent were 21 or under, whereas only 22 percent of the nonvocationally trained workers started at 21 or under. The mean age at time of hire for the two groups were 25.8 and 29.6 years old, respectively. Medians were 23 and 26 years old.

TABLE 4

GENDER, AGE AT HIRE, AND HIGHEST GRADE COMPLETED OF VOCATIONALLY TRAINED AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained	Mean	Median	Nonvoc. Trained	Mean	Median
Gender						
Male	53.6%	N/A	N/A	51.7%	N/A	N/A
Female	46.4			48.3		
Age at Hire						
<18	3.8%	25.8	23	4.5%	29.6	26
18-19	7.3			9.0		
20-21	22.6			8.5		
22-25	27.8			23.3		
26-30	19.1			20.0		
31-40	14.6			19.7		
41-50	3.8			9.6		
51+	1.0			5.4		
Highest Grade Completed						
8	0.0%	13.5	14	1.8%	12.7	12
9-11	1.8			7.2		
12	20.3			60.7		
13-14	69.6			15.4		
15-16	7.3			11.5		
>16	1.1			3.4		

The vocationally trained workers also differed in their educational attainment. About 80 percent of them had completed higher than the 12th grade. Only about 30 percent of the non-vocationally trained had any postsecondary education. From the table, it can be noted that vocationally trained workers tended to be younger at the time of hire and to have more education than their non-vocationally trained counterparts.

The next set of characteristics examined were work experience characteristics. The data are shown in table 5. First of all, it can be seen that the nonvocationally trained workers had, on the average, much more related work experience prior to being hired than did vocationally trained workers. They averaged approximately 33 months of related work experience compared to only 23 months for the vocationally trained employees. Part of this difference is likely to be explained by the fact that the nonvocationally trained workers were older at the time of hire.

TABLE 5

WORK EXPERIENCE CHARACTERISTICS OF VOCATIONALLY TRAINED AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained	Mean	Median	Non-vocationally trained	Mean	Median
Months of Related Prior Work Experience						
0 months	43.4%	23.0	6	39.7%	33.0	9
1-4	5.8			3.9		
5-8	4.7			6.0		
9-12	11.6			8.1		
13-24	12.0			13.8		
25+	22.5			28.5		
Still Employed?						
Yes	83.3%	N/A	N/A	87.6%	N/A	N/A
No	16.7			12.4		
Promoted?						
Yes	55.1%	N/A	N/A	44.9%	N/A	N/A
No	44.9			55.1		
Months to Promotion						
<2	16.1%	7.5	6	23.7%	6.0	4
3-4	24.8			27.8		
5-6	25.5			24.8		
7+	33.6			23.7		

Since the questionnaire asked for information concerning workers hired several months prior to the interview, it was possible that the workers had been separated from the firm in the interim. Indeed, about a sixth of the vocationally trained workers had been separated, and about an eighth of the nonvocationally trained workers were no longer with the firm.

In looking at promotions, it is clear that vocationally trained workers had a higher promotion rate than nonvocationally trained workers. Over 55 percent of the former had been promoted as compared to only 45 percent of the latter. Interestingly, however, the average length of time at the firm before receiving the promotion, for those workers who had been promoted, is shorter for nonvocationally trained workers. This may be explained by the fact that the latter tended to have more work experience.

The final characteristics to round out the profiles of vocationally trained and nonvocationally trained workers are training time, productivity measures, and wages. Information about the number and hours spent in training during the first 3 months of work was gathered for each specific worker as well as for a "typical" worker. Training time was disaggregated into formal training (such as self-paced training programs or training given by specially trained instructors), informal training given by management or line supervisors, and informal training given by coworkers, who are not supervisors. Table 6 provides summary data about the training time of vocationally trained and nonvocationally trained workers.

TABLE 6

TRAINING TIME FOR VOCATIONALLY TRAINED
AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained			Nonvocationally Trained		
	Distribution	Mean	Median	Distribution	Mean	Median
Formal Training Hours						
0	47.6%	27.7	0	47.3%	29.5	0
1-20	19.0			19.1		
21-40	10.3			8.2		
41+	15.8			17.7		
Some, DK #	7.3			7.7		
Informal Training by Management						
0	9.4%	66.0	24	11.0%	52.6	20
1-20	30.1			31.7		
21-40	14.9			16.0		
41-80	12.7			9.9		
81-120	5.1			5.9		
121+	11.6			8.5		
Some, DK #	16.3			17.1		
Informal Training by Coworkers						
0	19.6%	61.1	20	22.1%	37.2	10
1-20	19.6			24.0		
21-40	13.1			13.3		
41-80	8.9			5.3		
81-120	3.8			2.9		
121+	9.6			5.8		
Some, DK #	25.4			26.5		

Both groups were reported to spend almost exactly the same amount of time in formal training. However, the nonvocationally trained workers received significantly less informal training. On average, they received about 53 hours of informal training given by management as compared to 66 hours for vocationally trained workers. The means are 37 and 61 for informal training by coworkers for the nonvocationally trained and vocationally trained, respectively. The differences may be explained by many factors. First of all, because the nonvocationally trained workers have more related job experience, they may require less training. Second, jobs and firms are not controlled in this analysis, so it may be the case that the occupations that vocationally trained workers go into require more training than other occupations. Third, there may be "selection on the job," meaning that employers choose to invest more in training for those workers they perceive to be most promising. Thus receiving more training is a positive sign.

We asked employers to rate employees on a productivity scale of zero to 100 at three points in time; during their first 2 weeks on the job, during their first 3 months, but after that initial 2 weeks, and finally, today (at the time of the interview or during their final week of employment, if they had separated from the firm). Interestingly, virtually no differences in the productivity profiles were found. Both groups had an identical average productivity rating during the first 2 weeks of employment of 58.2. That rises to around 75 for the second productivity score and about 87 for the third.

Finally, wage rates were examined. Two wages were reported. The first was the starting wage for an individual who would start work today in the job held by the specific workers being described. The second was the workers' specific wage rates at the time of the interview. Unlike the productivity data, there is a clear difference in the wage patterns. The vocationally trained workers started at a slightly lower average wage rate ($5.07 compared to $5.12), but by the second report, their wage had overtaken the nonvocationally trained worker ($6.05 compared to $5.91).

III. QUALITATIVE DATA CONCERNING VOCATIONAL EDUCATION

The previous chapter presented rather exhaustive analyses of the quantitative data on the questionnaire. In this chapter, the responses received to the final question in the survey are discussed.

Do you have any special comments or concerns dealing with vocational education that you would like to share with the South Dakota Council on Vocational Education?

In the survey procedures, in addition to the respondents who completed the entire survey, individuals who declined to participate were invited to respond to this question. A significant number did so and their comments are included here.

Comments about Specific Existing Programs

A number of the employers gave comments addressed at specific programs at specific institutions. Some of the comments were positive in nature and some were negative. In general, the following types of programs were viewed favorably:

- Electronics
- LPN programs
- High school distributive education

Employers were most negative toward some of the trade and industrial programs, such as construction trades, welding, and auto mechanics, but negative comments were also received about food preparation, advertising, and cosmetology. In considering these comments, it should be remembered that the survey was designed to be valid at the state level only and is not necessarily representative at any substate or regional level. Furthermore,

these are spur-of-the-moment opinions of employers and are not rigorous evaluations.

Some of the comments received about vocational-technical school programs follow:

- o Licensed practical nursing

  -- (Health care provider, Gregory). I feel that vocational education is very valuable, especially in the 2 year programs for LPN's (with a diploma). Staff orientation time . . . . is cut from 6 months to 6 weeks.

  -- (Health care provider, Webster). Some of my best LPN's were trained in voc-tech schools . . . . RN's feel they know it all whereas LPN's don't seem to have this attitude.

  -- (Health care provider, White). Basically our LPN's are better workers than RN's who have college education. The LPN's have more practical experience. The RN's have been educated and have been taught in the classroom setting but have less hands-on experience.

- o Auto mechanics

  -- (Auto dealer, Sioux Falls). Vocationally trained people are not trained well enough to start anywhere but on the bottom . . . . Takes 2 years to train them at the dealership.

  -- (Auto dealer, Rapid City). Voc-tech schools are not up to date to comply with the fast changing technology from Detroit auto manufacturers. I have to train mechanics myself or send them to special school operated by the auto makers. I also feel that voc-tech schools should teach a customer relations course.

  -- (Boat dealer, Yankton, former vocational-technical school instructor). As I see it, having been in the system, students are not getting enough in-depth in either technical or academic courses . . . . Some subjects taught without the necessary equipment (e.g., wheel alignment instruction without a machine).

- o Cosmetology

  -- (Beautician, Selby). I think that vocational education has a tendency to simplify our line of work to the students. They tell them that in a year, or less, they will know all about it, that it is easy!

- Electronics

  -- (Utility, Baltic) [Re: Mitchell Vocational-Technical School Electronics program]. I feel the quality of the program is better than when I attended. They have added a third year to the electronics program, which improves that program.

  -- (Public sector employer, Marion). Vocational education is working well in our state. In fact, some of the larger electronics companies have been hiring our voc-tech trainees because they have excellent training.

  -- (Real estate firm, Rapid City). I'm all for it--I think everybody should know how to make a living when they get out of high school . . . . One woman friend of mine--a voc-tech computer grad--is now the 5th highest paid woman in Rapid City. She repairs computers.

  -- (Instrumentation manufacturer, Sioux Falls). There is much more to tell. What we in industry really, really need is a combined degree, where two year voc-tech graduates can continue in their education to get four year degrees, etc. . . . . The BSET 4-year program at SDSU is a good answer for us as the largest employer of electronics trained people in the state. Problem is that most students in that program come from voc-techs in other states.

- Advertising design

  -- (Commercial photographer, Sioux Falls). I have had many applicants from the voc-tech school in town here and they don't know the equipment or even the terms. I am not impressed. It's really too bad---they have modern equipment but they are not teaching what they say they offer . . . . In the typesetting course, there are large gaps in the training. They [Southeast Area Vocational-Technical School] are skipping portions of the curriculum.

- Construction trades

  -- (Carpenter, Sioux Falls). Voc-techs have got carpenters working for $4/hour. Kids leave school with the idea they're going to make a living at it but the wages aren't high enough because there are just too many of them. They just keep pumping them out and pumping them out. The employers are just laughing about it--I hear them say I hope they send another batch to us next year!

-- (Construction company, Rapid City). We hire people based on their on-job experience. Voc-tech grads think they've paid their dues and want wages they aren't worth. We are a commercial building contractor--primarily concrete, steel, glass. Voc-tech's emphasize wood construction.

-- (Carpenter, Armour). I'm primarily a remodeler and they don't teach this in voc-techs.

-- (Farm machinery manufacturer, Sioux Falls). South Dakota vocational education is at a disadvantage because vocational-technical schools in two neighboring states (Minnesota and North Dakota) are far more up to date. For example in wire vs. stick welding, most plants are now using wire welding, but the voc-tech program is still using stick.

o Food preparation

-- (Civic association, Ft. Pierre). I haven't heard any favorable remarks about the Food Preparation and Baking training at Mitchell Voc-Tech. In general, persons trained in that program are not as good as they could be and have difficulty finding employment.

-- (Motel operator, Sioux Falls). Bitterly disappointed in voc-tech people. I hired a person out of a voc-tech, but he thought he knew everything when he really had very limited knowledge. He did not have a willingness to work. People come out only knowing how to fry hamburgers. I have visited the Mitchell program. They have good facilities, but because Mitchell is so isolated, students are not able to get OJT.

Fewer comments were received about specific programs in high schools. A sampling of the comments that were received follow:

o (Insurance agency, Milbank). At the high school level, our Distributive Education program is very good. I think very highly of it.

o (Auto parts dealer, Gregory). We use DECA students from the local high school and it works out very well.

o (Shoe store, Rapid City). Our corporation is a real strong supporter of DECA and is one of the supporters for the national DECA conference.

- (Health care provider, Lennox). The office education program in Lead High School is just excellent. The work experience program gives them a chance to test it out before spending the money to go on to a voc-tech school.

Comments Suggesting That Programs Be Developed

A significant number of comments made by employers suggested that certain programs should or could be developed and offered that currently are not available (at least, to their knowledge). Some of these program suggestions were extremely specialized and probably would have limited demand. Others, however, if offered, may generate sufficient demand. The specific programs requested are as follows:

- Limited demand
  - -- dog grooming
  - -- musical instrument repair
  - -- golf course maintenance
  - -- fitness/spa occupations
  - -- injection plastics
  - -- travel agent
- Sufficient demand
  - -- optometry
  - -- meat cutting
  - -- heavy equipment
  - -- truck driving
  - -- child care
  - -- teller/banking occupations

These suggestions are detailed in the following excerpts:

- Limited demand programs
  - -- (Pet groomer, Sioux Falls). Nobody in the state has a dog-grooming program. Nearest is in Twin Cities area. This is an extremely high demand industry: I believe there could be 15 more in the Sioux Falls area. Wages are $6 - $6.25/hour.
  - -- (Music store, Pierre). We do instrument repairs - a vocational education field. Only 3 people in the entire state are qualified for this.

-- (Golf course, Southeastern South Dakota) . . . . would like to see programs offered for golf course supervisor, groundskeeping, and maintenance, especially at high school level. There's a need for qualified people in this field and voc-tech schools need to add it to their curricula.

-- (Fitness Center, Pierre) . . . . would like to see 1-2 year programs in the field of fitness (health club management, instruction, etc) since it's such a growing field. I have a B.S. in Sports Management, but I wish I'd had voc-ed "hands-on" experience instead because it would have been more beneficial.

-- (Public sector employer, Isabel). In my job, I always deal with people needing technical skills and I find that I cannot help employers fill jobs with technically trained people because the skills are not being taught within South Dakota. For example, injection plastics. The closest program is in Minneapolis and we can't get people from there to come here.

-- (Travel agency, Sioux Falls). The state of South Dakota does not have a travel school that teaches the relevant airline system for travel training. I'm very critical of travel schools because they hire persons to teach who have little or no experience in the field of travel.

o <u>Programs with sufficient demand</u>

-- (Optician, Brookings). No known programs in South Dakota; only Minnesota. Students from South Dakota would like to attend school in state or have reciprocity with Minnesota to avoid higher fees. Equipment suppliers will donate equipment; the problem is finding qualified instructors.

-- (Meat packer, Eastern South Dakota). I am concerned that there is no meat cutting training available in our immediate area. The closest one is in Pipestone, MN. . . . . Since there is a voc-tech campus here, I'm wondering why the meat cutting trade is not offered there.

-- (Construction company, Howard). No voc-tech program in South Dakota for heavy equipment operator, so I have to school them myself.

-- (Construction company, Rapid City). In our area, no heavy equipment voc-tech courses are available. Most vocational education mechanical courses are for smaller equipment, so we don't get voc-tech graduates.

-- (Day care center, Southwestern South Dakota). Nobody offers vocational education courses in child care in our area, but I think it would be a great thing.

-- (Financial institution, Rapid City). In the banking industry, I feel we are in need of some type of teller training. I know that in Minneapolis and Denver, this type of training is available.

-- (Trucking company, Whitewood). For my type of business, South Dakota is in need of a good truck driver training program. Most insurance companies will not insure anyone under the age of 25, but perhaps they could be persuaded to insure younger drivers who had undergone proper training.

Comments about Vocational Education Graduates

Many of the employers who offered remarks gave comments about former vocational education students that they had hired. As with the other categories of comments, both positive and negative comments were made. However, the majority of comments were positive toward vocational education graduates. Depending on the respondent, vocational education graduates--

-- are more enthusiastic.
-- require less training.
-- are preferred over individuals trained in college or military.
-- are preferred over individuals with several years work experience.
-- have common sense.
-- require less time to be productive employees.

On the other hand, some employers reported that vocational-technical graduates--

-- expect too much money.
-- are "know-it-alls."
-- have poor work attitudes.
-- produce poor quality work.

To put these descriptions into context, following are selected excerpts from the comments:

- More enthusiastic

  -- (Construction company, Scotland). Vocational-technical schools are doing a "great service" to all who are involved, i.e. the student, the employer, and the consumer. Students who attend voc-tech schools are more specialized in their field and perform their jobs in a more enthusiastic manner.

- Expect too much money

  -- (Auto repair shop, Rapid City). Voc-tech grads seem to come out feeling they should be paid the same as experienced workers, but they don't have on-job-training.

  -- (Construction company, Rapid City). Voc-tech grads think they've paid their dues, and want wages they aren't worth.

  -- (Business association, Pierre). They [voc-tech students] think they know more than the boss at times; demand higher wages than they should be getting.

- Require less training

  -- (Health care provider, Dell Rapids). I'm strongly in favor of vocational education. We can see the difference in the training . . . . saves employers time and money.

  -- (Health care provider, Sioux Falls). I know from experience that an employee with vocational education takes less time to become productive.

  -- (Auto dealer, Sioux Falls). About 30% of employees here have voc-tech training--mainly in the service department. Those with some voc-tech background "catch on quicker."

  -- (Repair service, Aberdeen). We've had a lot of vocational-technical school people. They come with very good basic training background. They learn more easily.

- Are "know-it-alls"

  -- (Commercial printer, Vermillion). After 6-12 months of vocational education training, many students feel they "know-it-all" and are "smart-alecs who try to run the business"--They don't necessarily know more than people with no vocational education training at all. It's a real problem in my opinion because they're hard to train.

- Are preferred over college students

  -- (Real estate, Rapid City). I think that vocational-technical school training is better than either college or military, because college gives no hands-on experience and military do it only their own way.

  -- (Business services, Aberdeen). Vocational education grads want to work harder than 4-year students and they take their job more seriously.

  -- (Auto repair shop, Belle Fourche). Vocational education is extremely valuable. I would hire a voc-tech trained person over a college grad in my business.

  -- (Mining, Minnesota employer). I have more faith in graduates of a vocational education program than a graduate of a college program.

- Poor attitude

  -- (Repair service, Aberdeen). Attitude is the only problem we've had (with vocational education people). They feel they're overtrained sometimes and their attitude is poor sometimes.

- Preferred over experienced workers

  -- (Retail nursery, Rapid City). I have 2 employees who went through SE Area Vocational-Technical (horticulture/landscaping). They do good work as a result. °You can tell the difference' between their work and that of untrained employees, even if the latter have prior experience.

  -- (Wood products manufacturer, Sioux Falls) . . . . been much more satisfied with people out of voc-tech than with people with 5-6 years of experience.

- Poor quality work

  -- (Electrician, Aberdeen). Vocational education programs should strive for better quality workers. When we take on a vocational education graduate, it drives down the quality of our work.

- Have more common sense

  -- (Retail nursery, Sioux Falls). Give me a voc-tech student any day! I am greatly impressed by the average voc-tech student who indicates, 'Here I am. This is what I know. What else do I need to know? Where do I

get the information?' Most important, 'What can I do to make myself valuable to your firm?'

-- (Auto repair shop, Sioux Falls). I have 4 children--2 are voc-tech students and 2 have graduated, with honors, from college. The two in voc-tech school are much better prepared for "life in general" than the college graduates. You could put the 2 college graduates in the center of the state, and they couldn't find their way home.

Curriculum and Instructional Issues

Several comments addressed curriculum content or instructional issues. Heard quite often were comments that (1) vocational educators need to communicate more often with employers to find out about the "real world" and (2) there needs to be more emphasis on employability or work maturity skill development. Following are excerpts from some of the comments.

o Communicate more with employers

-- (Home furnishings manufacturer, Webster). What occurred with DECA students was that the school district doesn't really provide a link with the employer. There has to be a great deal of coordination and communication.

-- (Construction machinery manufacturer, Canton). Vocational educators need to get out and talk to real business and to get work experience for their students.

-- (Restaurant, Spearfish). Vocational-technical schools need more existing businesses contibuting to their classrooms--might give students better idea of what it's like working in a "real situation."

-- (Wholesaler-grain, Aberdeen). I feel that the South Dakota Vocational Education Department should make more personal contact (i.e., on the job site visits) with businesses instead of writing letters.

o Too much academics; not enough "hands-on"

-- (Restaurant, Spearfish). Voc-tech teachers need a realistic approach to work; not just an academic one. That experience that comes only with doing the job.

- Need to teach flexibility

  -- (Automotive repair, Rapid City). The training is okay but the students still need to learn that they have to remain flexible when they get in the work force. They need to know that they will have to do it the way the company wants and not necessarily the way they were taught.

  -- (Business association, Pierre). One thing vocational education has to do is be flexible enough to change with the times, for example training persons to use computer terminals.

- Better teacher training needed

  -- (Repair services, Sioux Falls). I attended S.E. Area Vocational-Technical school in auto mechanics (1976-77). I presently work on motorcycles and snowmobiles. The regret I have is that although my teacher was a great mechanic, he was not really a teacher. I feel that teachers should have more teacher preparation.

  -- (Restaurant, Sioux Falls). I feel that the education system is artificial, they have good educators, but the educators do not have the business experience to convey the expectations of employers.

- Better labor market analyses needed in planning

  -- (Wholesaler-lumber, Sioux Falls). We are in a rapidly changing world and Vocational Education must be prepared to shift their education emphasis as conditions demand. We can't pump out 35 to 70 grads in a given field if there are only 20 businesses who will employ them.

  -- (Machine repair shop, Rapid City). We need to do something--I probably get 10 guys a week looking for jobs . . . . We have a whole heap of trained individuals with nothing to do.

  -- (Restaurant, Mobridge). I know a lot of people that have gone to vocational-technical schools. Many of them can't find jobs in their field unless they relocate to larger cities. Many of them don't want to leave this area (pop.--4,000) so they end up working for less, out of their training area.

- Teach work maturity skills

  -- (Health care provider, Watertown). I think there's 2 areas all vocational programs need to improve on: 1) communications and 2) human relation skills. Currently, vocational education programs do address the technical skills area but do not address the abovementioned two areas.

  -- (Communications equipment manufacturer, Brookings). It is important for our company that vocational graduates be given more training on communication skills (written and verbal).

  -- (Drug store, Sioux Falls). Vocational education students often don't have communication skills. More emphasis needs to be placed on this at high school level.

  -- (Mining equipment manufacturer, Yankton). There needs to be an increased emphasis on skills of being a productive, cooperative, dependable, loyal, contributing, problem-solving employee. There also needs to be an increased understanding of management requirements that govern operations which result in profit which is the only way jobs are created and maintained.

  -- (Restaurant, Sioux Falls). Students in vocational education are not taught many of the basics of the business world (i.e. urgency of taking care of guests/customers) and being responsible in jobs (as far as showing up for work should be a higher priority than their social life, etc.)

- More emphasis on basic skills

  -- (General merchandise store, Pierre). Basic education in high school is lacking.

  -- (Civic association, Sioux Falls). I think they learn a lot of skills but they need to work on the basic skills like reading, writing, and math. The vocational education students and graduates that I have dealt with are lacking in these areas.

- Need to encourage creativity

  -- (Utility, Madison). Vocational education is an excellent means of placing skilled workers in work force, but frankly the vocational-technical school system here does very little to develop future leaders--little promotion of creativity. Not all

people are leaders, but crash courses result in dollar-oriented grads.

-- (Industrial machinery manufacturer, Rapid City). Vocational-technical school programs insufficiently creative and theoretical.

State Regulatory and Governance Issues

The fifth general area of comments received dealt with state regulatory and governance issues. A few employers felt that the state should bear a larger share of the funding of vocational education--particularly the vocational-technical schools.[3] Others felt that increased standards and requirements promulgated for high school students will hurt secondary vocational education. Finally, specific regulatory actions such as turning the University of South Dakota-Springfield into a prison were criticized. Excerpts from these comments follow:

- Funding issues

  -- (Business assocation, Sturgis). I feel state should run secondary vocational education . . . . local area raised money to build an area vocational-technical school and now due to lack of support, it will be closing. This left a bad feeling in the area because of local donations.

  -- (Meat packer, Rapid City). I feel that the state should be more involved in funding vocational education much like the funding in our colleges. I feel that regional funding for vocational education is wrong. It's a statewide function.

  -- (Plastics manufacturer, Brookings). Vocational schools such as the Lake Area Vocational-Technical School do not provide excellent occupational training in the machinist trades--not because they don't want to but because of the way in which vocational education is funded in South Dakota. The present procedure, in my opinion, leaves much to be desired because the funding

[3]Note this funding concern was an employer perception that does not necessarily reflect the actual funding policies of the state.

process is based on numbers of students graduated rather than the quality of the graduates. The machinist trades cannot be treated the same as some other skilled trades because the ratio of students-to-instructors has to be much lower in order to achieve quality education. Also, the machinist trades are upgrading constantly to state-of-the-art equipment. If this equipment isn't available, they can't teach it. Simply stated, vocational education in the machinist trades has to be overhauled in South Dakota or we will remain in the lower echelon of quality in student learning.

- o Effects of high school academic requirements on vocational education

  -- (School, Miller). I'm a little disappointed that the Board of Regents has required foreign language for entry into college--2 years! High school students are taking languages as alternative to vocational education.

  -- (Bank, Huron) . . . . the high school curriculum demands so many college prep courses, so early, that there's no room for vocational courses in schedules should a student be undecided or change his mind by 10th grade.

  -- (Miscellaneous retail store, Sioux Falls). We should get to school boards prior to them increasing their requirements for graduation. It seems they are assuming that all persons are college bound.

  -- (Public sector employer, Oldham). With new requirements from the state, vocational education has been downgraded.

- o Criticism of recent policies

  -- (Construction company, Lennox). USD-Springfield was the best school the state had for construction.

  -- (Health care provider, Rapid City). They shut down the LPN program leaving us without a source of LPNs; left the health care providers up in the air. We have to go out of the area, just at the time when we were going into a shortage of LPNs. It just didn't make sense! All of our LPNs are vocational-technical school grads (28 of them) almost all from Western Dakota Vocational-Technical School (program now closed).

- Geographic coverage

  -- (Utility, Jefferson). Our closest school is in Iowa and we need one in South Dakota to serve our area.

  -- (Restaurant, Aberdeen). I'd really like to see more vocational training offered in this area (Aberdeen). Most young people from this area have to go to Rapid City, Sioux Falls, or Mitchell to get their training. From my understanding, the vocational training offered here at Presentation College is more in medical fields (like X-ray tech, etc.)

  -- (Health care provider, Lemmon). We live in the northwest corner of the state. There is no postsecondary vocational education avilable within 200 miles.

General Comments

The final category of comments are grouped here as general comments relevant to vocational education. The five types of comments reviewed are as follows:

- Vocational education is a good motivator for some students.

  -- (Securities dealer, Sicux Falls). It's a good motivator for a number of individuals who lack the desire to attend college.

  -- (Tourist court, Spearfish). I like to tell the story of a young man who dropped out of high school as illiterate. After several years, he attended an auto mechanics program in Denver which stimulated the youth's desire to learn to read after years of nonreading in traditional public schools . . . . different institutions respond to different people's needs.

  -- (Wholesaler-groceries, Deadwood). We should slant more of high school education toward the 85% of students not going to college. I get an incredible number of high school graduates in here who cannot read or write. More of the 85% should be encouraged toward vocational training.

- Vocational-technical schools are affordable, excellent alternatives to college.

  -- (Sawmill, Custer). Vocational education is absolutely positive. College is not for everyone.

  -- (Building materials store, Gregory). I'm a believer in vocational education. In a highly technical age, we still need tradesmen. Postsecondary vocational education should be a part of public education.

  -- (Contractor, Aurora). I think vocational schools are very good. A lot of families can't afford college expenses.

  -- (Funeral home, Watertown). Vocational training bridges the gap for a lot of students. A lot of students cannot afford 4 years of college, plus people go to 4 years of college and have only a general education with nothing for the job they might be interested in.

  -- (Food store, Rapid City). I think vocational schools are a good thing to help students in ordinary jobs. I don't think much of the big colleges--too expensive. A lot of things you have to take will not do any good when you go out to work, where voc-tech training would.

  -- (Wholesaler-construction materials, Rapid City). Vocational-technical schools are very, very good in South Dakota. The one closest to me (Western Dakota) has done an outstanding job. A lot of people don't need 4 year college training . . . . Vocational-technical schools are more beneficial in a lot of types of work.

  -- (Public sector employer, Gayville). I'm in favor of vocational education. I feel it's probably more important than obtaining a college degree. People who are vocationally trained are more prepared for the actual work situation than those who are college-educated.

  -- (Apparel store, Rapid City). The benefits of vocational education are good for those people who don't want to go through 4 years of college and want training for better job opportunities.

  -- (Public sector employer, Jefferson). I think vocational education is a good thing for students who cannot go to college. It gives them some options that they wouldn't get otherwise.

- Vocational education has a perception problem.

  -- (Drug store, Sioux Falls). "Stigma" of vocational-technical school students exists in some areas as being "2nd class students," unable to succeed in 4 year programs.

  -- (Restaurant, Spearfish) . . . . need to change perception of vocational education. Encourage better students to take vocational education training instead of feeling that vocational education is only for those students who wouldn't make it in a regular 4-year program.

  -- (Health care provider, Webster). I am glad that the stigma attached to vocational-technical students is losing ground. Some of my best LPN's were trained in vocational-technical schools.

  -- (Health care provider, Mitchell). Need to change the name because of the stigma attached to vocational students.

  -- (School, Platte). I probably wouldn't send my own children to vocational education schools because they're both good students. There is a stigma attached to vocational education schools--if a child has learning problems or isn't very bright, they go to vocational-technical schools in our area.

- Vocational education can be beneficial to the members of Indian tribes.

  -- (Social service agency, Pierre). Vocational-technical schools are particularly good for Indians. Four-year institutions seem to be a mental block, but they seem to be able to handle the social adjustment of 9-15 months at a vocational-technical school.

  -- (Public sector employer, Lower Brule). There is a great need for a vocational-technical school for Indian students; preferably in the central part of South Dakota.

- Better public relations is needed.

  -- (Temporary services, Sioux Falls) There is not enough advertising done by vocational-technical schools in our area. Many persons who come to us to apply for temporary jobs are not aware that there are refresher courses available in typing.

-- (Health care provider, Hill City). I think high school students really need vocational education and more awareness of its possibilities. Vocational education "is the best thing that ever happened." For the education I received, I've had a better return for my investment than I could have had from anything else; especially being a woman in this day and age. Every woman needs to prepare for a career whether she plans to get married or not. I have marketable skills. I can work only because of the vocational education training received.

-- (Service station, Chamberlain). Vocational education should be advertised and promoted more in high school as a choice. Students are better off taking courses that will help them earn a living.

-- (Miscellaneous retail store, Sioux Falls). From my experience in South Dakota, it appears that the vocational training here is not publicized enough. I'm from California and the vocational training or education on the West Coast is more advanced, more varied, and more publicized.

-- (Wholesaler-farm supplies, Sioux Falls). Business people need to be exposed to vocational education. I was just recently made aware of vocational-technical schools and their possible application to my business.

-- (Miscellaneous retail store, Sioux Falls). As far as South Dakota is concerned, I think voc-techs has been its best-held secret--very little publicity about them. We've sent people to Brainerd Minnesota to the vocational-technical school there--I did not realize . . . . how available and intensive the training is here--We need a better PR job.

IV. MARKETING AND POLICY RECOMMENDATIONS

Considerable quantitative and qualitative data were collected during the course of this project. In this chapter, the major findings from analyses of the data are reviewed. In addition, recommendations to the COVE for a potential marketing campaign are provided as well as general policy recommendations.

Findings

The major finding established by this project was that vocational education programs and graduates have solid employer support in South Dakota. When they hire high school graduates for entry-level positions, most employers reported that they would prefer individuals who have completed a vocational education program. They disagreed with the statement that if everything else was the same about a job candidate that they would hire someone with a 4-year college degree rather than someone from a vocational-technical school. Employers reported that they encourage employees who want more schooling to attend vocational-technical schools or colleges. A large share of employers have participated in cooperative work experience programs, have been involved with high school or postsecondary representatives in curricular decisions, have donated equipment, or have interacted with the vocational education system in some other way.

The qualitative data corroborate the quantitative evidence supporting this point. Employers reported that they had had good

experiences with a number of specific programs and that vocational education graduates that are hired--

-- are more enthusiastic.
-- require less training.
-- are preferred over college or military trained persons.
-- are preferred over individuals with several years work experience.

To be sure, the employer support was not unanimous. A significant number of employers were critical of the system or its graduates. Where mentioned, these comments have been incorporated into the policy recommendation section of this chapter. Across the sample of employers, small business respondents tended to be more positive toward vocational education than large businesses. The difference in the level of support is small by about any standard of measurement but nevertheless showed up consistently in the data. Across the sample, employers were more familiar with and more favorable toward postsecondary vocational education as opposed to high school programs. Comments tended to be addressed toward postsecondary aspects of the system and the quantitative data were skewed in that direction as well.

A second major finding from the study was the systematic differences found between vocationally trained and non-vocationally trained workers. Data supplied about specific workers hired recently were used to construct a profile indicating that vocationally trained workers tended to--

-- be younger at age of hire.
-- have greater educational attainment.
-- have less prior relevant work experience.
-- be more likely to be promoted.
-- receive more training on the job.
-- experience greater wage growth during the early part of the employment relationship.

These conclusions were buttressed by qualitative evidence that indicated that vocationally trained workers--

-- had better work attitudes.
-- exhibited more common sense.
-- were more enthusiastic.

Marketing Recommendations

In attempting to publicize the merits of the vocational education system in South Dakota, the COVE has to, of course, bear in mind the audience. The various findings and data from the study may be more or less apropos to employers and to students and families.

Employer Audiences

In the competitive business world, employers are likely to be more sensitive to the payoffs and expenses associated with hiring vocational education students. As such, they would be interested in the fact that vocationally trained workers are better educated, have a greater likelihood of being promoted, are hired at younger ages, and (tentatively) have longer expected employment durations. They would be impressed favorably by comments suggesting that vocation education students "catch on quicker" and require less time to be trained. Some direct employer quotes follow:

We can see the difference in the training . . . . saves employers time and money.

I know from experience that an employee with vocational education takes less time to become productive.

We've had a lot of VE people. They come with very good basic training. They learn more easily.

Apart from dollars and cents, many studies have indicated that work attitudes of youth are the most important consideration taken into account in employer hiring decisions. The South Dakota employers, on average, agreed with the direct statement that vocational education students have better work attitudes by about a 3-to-1 margin. As one employer stated,

> **I am impressed by the average vocational-technical school student who indicates, Here I am. This is what I know. What also do I need to know? Where do I get the information?' Most important, °What can I do to make myself valuable to your company?'**

Many employers expressed the opinion that more publicity needs to be accorded vocational education. Simply becoming aware of the strong base of support among employers should convince other employers that vocational education is of value. For this purpose, many of the positive comments provided by employers could be used.

Student Audiences

Students need to be made aware of the benefits that they could receive from vocational training. In particular, the data show that wage growth and promotion likelihood are positively correlated with vocational education. The average starting wage for a job held by vocationally trained workers was $5.07, whereas it was $5.12 for individuals who were not vocationally trained. But by 2 years after the hire, the average wage $6.05 and $5.91, for vocationally trained and nonvocationally trained workers, respectively.

Furthermore, as students are making their educational investment and career choices, they and their parents need to know about employer opinions about vocational training vis-a-vis other educational or training options. They need to see or hear that a majority of employers prefer graduates of vocational education programs. It would be effective for them to be aware of comments such as the following:

> **I think that vocational-technical school training is better than either college or military.**
>
> **Vocational education is extremely valuable. I would hire a voc-tech trained person over a college grad in my business.**
>
> **I have more faith in graduates of a vocational education program than a graduate of a college program.**

Policy Recommendations

The employers, in general, were very earnest in their responses and provided a number of suggestions for vocational education policymakers in the state to consider. First of all, cooperative work experience programs were highly praised. Most employers agreed with the proposition that they would prefer to hire an individual who had successfully completed a cooperative work experience program over an otherwise identical individual without cooperative work experience but with higher grades. Furthermore, well over half of the employers indicated that they had participated in a cooperative work experience or internship program. Co-op programs also are a means of "teaching" work maturity skills, which was a concern of some of the employers critical of vocational education.

A second item of policy relevance was the rather strong support of basic skill attainment of vocational education students. Most employers felt that the graduates of vocational education programs had adequate basic skills to perform entry-level jobs. The employers did feel that basic skills should be emphasized in secondary programs, whereas technical skills should be emphasized in postsecondary programs, however.

A third finding with policy relevance was the wage benefit of vocational training to workers. The state and individual municipalities should be aware that to the extent that vocationally trained individuals receive higher wages (and higher employment rates, although evidence on this was not collected in the study), the public is receiving a return on their investment in the vocational education. This is because individuals with higher wages and incomes tend to pay more taxes and receive fewer public services.

From the qualitative data, a number of interesting remarks with policy relevance were received. Comments were made about specific programs currently being offered. Favorable remarks were received about the following programs:

- Licensed practical nursing
- Electronics
- Distributive education programs in high schools

Employers were critical of aspects of the following programs:

- Auto mechanics
- Construction trades
- Machine trades
- Food preparation

Several employers felt that consideration should be given to developing and offering courses in the following areas:

- Child care
- Dog grooming
- Fitness/spa occupations
- Golf course maintenance
- Heavy equipment
- Injection plastics
- Meat cutting
- Musical instrument repair
- Optometry
- Teller/banking occupations
- Travel agent
- Truck driving

The employers were sensitive to the fact that some of these programs were highly specialized and would have limited student interest. However, the employers made the case that some of these suggested would engender sufficient student demand.

Several comments were received concerning curricular and instructional issues. For instance, a number of employers felt that vocational instructors needed to communicate more with employers. They need to teach or impart flexibility, according to other employers. Students need to learn that they will be facing changing technology as well as using different equipment and they will need to be flexible enough to adapt to the company's way of getting the job done. Vocational educators have been exposed to the message that work maturity or employability skills need to be emphasized, and some of the employers in this survey reconfirmed that message. Better communication skills seemed to be a particular area that employers felt warranted emphasis in vocational education.

Another general policy area where comments were received was in state regulatory and financing issues. Others felt that the state needed to be concerned about the impact of increased requirements and standards at the high school level on secondary vocational education programs.

Finally, some general comments made by employers suggested the following:

- Vocational education is a good motivator for a certain share of students.
- More emphasis needs to be put on the majority of students who are not college bound.
- Vocational-technical school programs may be particularly beneficial for Indians, and vocational education may be part of the solution to tribes' economic and social problems.
- More and better publicity needs to be put forth concerning vocational education.

In summary, the vocational education enterprise in South Dakota enjoys a strong base of employer support. Small businesses, in particular, are advocates of occupational training, and employers seem to be most familiar with and most favorable toward postsecondary (area vocational-technical) schools. On the average, employers professed a preference toward hiring vocational graduates, and on the average, vocational graduates experience higher wage growth.